In the Claims

Please cancel claims 1-8.

Please add new claims 9-17 as follows:

9. (New) A hydrogen-occlusion alloy regenerating apparatus comprising a deterioration detecting means for sending a detection signal when a hydrogen-occlusion alloy filled in a hydrogen reservoir and capable of occluding and releasing hydrogen has been deteriorated due to the deposition of impurities, a remaining-amount detecting means for detecting a remaining amount of hydrogen occluded in the hydrogen-occlusion alloy and for sending a detection signal when an internal pressure of said hydrogen reservoir caused by a released hydrogen corresponding to the hydrogen remaining in the hydrogen-occlusion alloy is not more than an upper limit pressure used in the hydrogen reservoir, and a heating means for heating the hydrogen-occlusion alloy to remove the impurities by the released hydrogen, based on both the detection signals from the remaining-amount detecting means and the deterioration detecting means.

10. (New) A hydrogen-occlusion alloy regenerating apparatus according to claim 9, wherein said deterioration detecting means detects an amount of hydrogen occluded in said hydrogen-occlusion alloy, and sends the detection signal if the amount of hydrogen occluded is smaller than an amount of hydrogen occluded when the hydrogen-occlusion alloy is normal.

11. (New) A hydrogen-occlusion alloy regenerating apparatus according to claim 9, wherein said deterioration detecting means detects a rate of occlusion of hydrogen in said hydrogen-occlusion alloy, and sends the detection signal when the hydrogen occlusion rate is lower than a hydrogen occlusion rate provided when the hydrogen-occlusion alloy is normal.

12. (New) A hydrogen-occlusion alloy regenerating apparatus for use in a fuel cell power generating system, the fuel cell power generating system including a reformer for producing a reformed gas containing hydrogen from a starting fuel, a fuel cell supplied with said reformed gas, a hydrogen reservoir containing a hydrogen-occlusion alloy capable of occluding and releasing the hydrogen in said reformed gas, and supplying the hydrogen released from said hydrogen-occlusion alloy to said fuel cell,

wherein said hydrogen-occlusion alloy regenerating apparatus comprises a deterioration detecting means for sending a detection signal when said hydrogen-occlusion alloy has been deteriorated due to the deposition of impurities in said reformed gas, a remaining-amount detecting means for detecting a remaining amount of hydrogen occluded in the hydrogen-occlusion alloy and for sending a detection signal when an internal pressure of said hydrogen reservoir caused by the released hydrogen corresponding to the hydrogen remaining in the hydrogen-occlusion alloy is not more than an upper limit pressure used in the hydrogen reservoir, and a heating means for heating the hydrogen-occlusion alloy to remove the impurities by the released hydrogen, based on both the detection signals from the remaining-amount detecting means and the deterioration detecting means.

13. (New) A method of regenerating a hydrogen-occlusion alloy comprising the steps of: generating a deterioration detection signal when a hydrogen-occlusion alloy filled in a hydrogen reservoir and capable of occluding and releasing hydrogen has been deteriorated due to the deposition of impurities; detecting a remaining amount of hydrogen occluded in the hydrogen-occlusion alloy and generating a remaining-amount detection signal when an internal pressure of said hydrogen reservoir caused by a released hydrogen corresponding to the hydrogen remaining in the hydrogen-occlusion alloy is not more than an upper limit pressure used in the hydrogen reservoir; and heating the hydrogen-occlusion alloy to remove the impurities by the released hydrogen, based on both the deterioration detection signal and the remaining-amount detection signal.

14. (New) A method of regenerating a hydrogen-occlusion alloy according to claim 13, wherein said deterioration detection signal is generated when an amount of hydrogen occluded in said hydrogen-occlusion alloy is detected to be smaller than an amount of hydrogen occluded when the hydrogen-occlusion alloy is normal.

15. (New) A method of regenerating a hydrogen-occlusion alloy according to claim 13, wherein said deterioration detection signal is generated when a rate of occlusion of hydrogen in said hydrogen-occlusion alloy is detected to be lower than a hydrogen occlusion rate provided when the hydrogen-occlusion alloy is normal.

16. (New) A method of regenerating a hydrogen-occlusion alloy in a fuel cell power generating system, the fuel cell power generating system including a reformer for producing a reformed gas containing hydrogen from a starting fuel, a fuel cell supplied with said reformed gas, a hydrogen reservoir containing a hydrogen-occlusion alloy capable of occluding and releasing the hydrogen in said reformed gas, and supplying the hydrogen released from said hydrogen-occlusion alloy to said fuel cell,

the method comprising the steps of: generating a deterioration detection signal when said hydrogen-occlusion alloy has been deteriorated due to the deposition of impurities in said reformed gas; detecting a remaining amount of hydrogen occluded in the hydrogen-occlusion alloy and generating a remaining-amount detection signal when an internal pressure of said hydrogen reservoir caused by the released hydrogen corresponding to the hydrogen remaining in the hydrogen-occlusion alloy is not more than an upper limit pressure used in the hydrogen reservoir; and heating the hydrogen-occlusion alloy to remove the impurities by the released hydrogen, based on both the deterioration detection signal and the remaining-amount detection signal.

17. (New) A hydrogen-occlusion alloy regenerating method according to claim 16, wherein the hydrogen released from said hydrogen-occlusion alloy is utilized for operating said fuel cell.

In the Specification

Please replace the paragraph beginning at page 9, line 24 with the following paragraph:

Hydrogen produced by the reformer 3 can be occluded in the hydrogen reservoir 43, and the occluded hydrogen can be released from the hydrogen reservoir 43. The first storage section 44 includes a so-called through-type tank having an inlet and an outlet. The inlet is connected to an upstream portion of the second bypass line 39, while the outlet is connected to a downstream portion of the second bypass line 39, and a first hydrogen-occlusion alloy MH1 is filled in the tank. The second storage section 51 includes an ordinary tank having an outlet also serving as an inlet, and a second hydrogen-occlusion alloy MH2 is filled in the tank. As shown in Fig. 2, the first hydrogen-occlusion alloy MH1 is of a low-pressure occluding/high-temperature releasing type and has characteristics to occlude hydrogen at 80°C under 0.15 MPa and to release hydrogen at 130°C under 0.8 MPa. As such a hydrogen-occlusion alloy, $LaNi_{3.96}Co_{0.6}Al_{0.44}$ may be used. The second hydrogen-occlusion alloy MH2 is of a high-pressure occluding/low-temperature releasing type, and has characteristics to occlude hydrogen at 60°C under 0.5 MPa and to release hydrogen at 30°C under 0.15 MPa. As such a hydrogen-occlusion alloy, $NmNi_{4.04}Co_{0.6}Mn_{0.31}Al_{0.5}$ (Mn is misch metal) may be used.

Please replace the paragraph beginning at page 13, line 17 with the following paragraph:

The regenerating treatment for the second hydrogen-occlusion alloy MH2 is conducted by heating the second hydrogen-occlusion alloy MH2 and maintaining it at a temperature of 120°C for 10 minutes to release hydrogen from the second hydrogen-occlusion alloy MH2. In this case, an amount of hydrogen occluded of at least about 0.015 % by weight is required for the regeneration of the second hydrogen-occlusion alloy MH2 made of the above-described material.

When the total sum of the volume in the second storage section 51 and the volume in the line extending from the second storage section 51 to the thirteenth two-way valve V13 is 3 liters, if the upper limit pressure used in the second storage section 51 is set at 1 MPa, an amount of hydrogen occluded of 0.037 % by weight at 120°C is an upper limit value for the amount of hydrogen released to satisfy such a regenerating treatment.

Please replace the paragraph beginning at page 15, line 11 with the following paragraph:

A deterioration detection signal and a remaining-amount detection signal from the fourth flowmeter 52 are transferred to the ECU 60, and the switch 55 of the heating circuit 56 is opened and closed under the control of the ECU 60 based on both the signals.